

Claim Listing

1-22. Cancelled

23. (Currently Amended) A twinax electrical connector, comprising:

a twinax cable having two electrical conductors spaced from each other and having a dielectric surrounding said two electrical conductors and an electrically conductive ~~layer~~ jacket surrounding said dielectric, said two electrical conductors each having exposed opposite ends;

a first plurality of shielding members in electrical contact with one end of said electrically conductive jacket;

a second plurality of shielding members in electrical contact with an opposite end of said electrically conductive jacket;

a first set of conductive spring elements each in contact with a corresponding one exposed end of said two electrical conductors; and

a second set of conductive spring elements each in contact with a corresponding second exposed end of said two electrical conductors.

24. (Original) The twinax electrical connector of claim 23, wherein said twinax connector carries signals having data speeds exceeding 5 Gb/sec.

25. (Original) The twinax electrical connector of claim 23, wherein the twinax cable has an elliptical cross-section.

26. Cancelled.

27. (Previously Presented) The twinax electrical connector of claim 23, further comprising:

a first interposer housing for receiving a portion of said first plurality of shielding members;

a second interposer housing for receiving a portion of said second plurality of shielding members;

a first retaining sheet for retaining said first plurality of shielding members and said first conductive spring elements;

a second retaining sheet for retaining said second plurality of shielding members and said second conductive spring elements;

a first movable interposer slide for receiving another portion of said first plurality of shielding members;

a second movable interposer slide for receiving another portion of said second plurality of shielding members.

28. (Previously Presented) The twinax electrical connector of claim 23, wherein said shielding members are conductive spring elements.

29. (Original) The twinax electrical connector of claim 23, further comprising a cable housing for housing said twinax cable.

30. (Previously Presented) The twinax electrical connector of claim 23, wherein said conductive spring elements are conductive springs.

31. (Previously Presented) The twinax electrical connector of claim 23, wherein said at least one conductive spring element is positioned between said exposed end and a conductive pad on a printed circuit board such that the

conductive spring element is compressed and retains approximately the same inductance as said two electrical conductors.

32. (Original) The twinax electrical connector of claim 23, wherein said electrical connector has an impedance of approximately 100 ohms.

33. (Currently Amended) The twinax electrical connector of claim 23, wherein said second plurality of shielding members provide 360 degree shielding of said ~~central cable~~ opposite end of said electrically conductive jacket.

34. (Currently Amended) The twinax electrical connector of claim 23, wherein said second plurality of shielding members provide less than 360 degree shielding of said ~~central cable~~ opposite end of said electrically conductive jacket.

35-36. Cancelled

37. (Previously Presented) An electrical connector having a plurality of twinax cables arranged in a vertical and horizontal array, comprising:

a first set of twinax cables arranged in a vertical array and spaced from each other;

each twinax cable having a pair of conductors, a dielectric layer and an electrically conductive jacket;

a second set of twinax cables arranged in a vertical array and spaced from each other and horizontally spaced from said first set of twinax cables;

a first plurality of conductive spring elements each positioned against a corresponding conductor;

a second plurality of conductive spring elements each positioned against a corresponding conductor;

a cable housing for retaining said first set and said second set of twinax cables;

a first interposer on one side of said cable housing for receiving one end of said first set and said second set of twinax cables;

a second interposer on another side of said cable housing for receiving an opposite end of said first set and said second set of twinax cables;

a first retaining sheet for retaining signal spring contacts in contact with each pair of conductors on said one end of said first and second set of twinax cables;

a second retaining sheet for retaining signal spring contacts in contact with each pair of conductors on said opposite end of said first and second set of twinax cables;

a first interposer slide biased in a direction away from said first interposer and receiving an opposite end of said signal conductors and having a retracted position and a normal extended position;

a second interposer slide biased in a direction away from said second interposer and receiving an opposite end of said signal conductors and having a retracted position and an extended position;

wherein said conductive spring elements retained by said first retaining sheet and said second retaining sheet are protected by said first interposer slide and said second interposer slide, respectively, when each is in said retracted position and wherein said first plurality and said second plurality of conductive spring elements extend beyond said first interposer slide and said second interposer slide respectively when each is in said normal extended position.

38. (Previously Presented) The electrical connector of claim 37, wherein the first plurality and the second plurality of conductive spring elements are fuzz buttons.

39. (Original) The electrical connector of claim 37, wherein said electrical connector carries signals having data speeds exceeding 5 Gb/sec.

40. (Original) The electrical connector of claim 37, wherein the twinax cable has an elliptical cross-section.

41. Cancelled.

42. (Original) The electrical connector of claim 37, further comprising a cable housing for housing said twinax cable.

43. (Original) The electrical connector of claim 37, wherein said electrical connector has an impedance of approximately 100 ohms.

44. (Original) The electrical connector of claim 37, wherein said second plurality of shielding members provide 360.degree. shielding of said central cable.

45. (Original) The electrical connector of claim 37, wherein said second plurality of shielding members provide less than 360.degree. shielding of said central cable.

46. (Previously Presented) An electrical interconnect system, comprising:

at least one cable having at least one central conductor and a conductive outer jacket with an insulator therebetween;

a set of cable housings retaining said at least one cable;

a first interposer cable housing having a first plurality of through holes corresponding to said at least one central conductor and a second plurality of holes partially overlapped in a radial direction with a respective one of said conductive outer jackets;

a second interposer cable housing having a third plurality of through holes corresponding to said at least one central conductor and a fourth plurality of holes partially overlapped in a radial direction with a respective one of said conductive outer jackets;

a first plurality of electrically conductive spring elements for insertion into said first plurality of through holes in said first interposer;

a second plurality of electrically conductive spring elements for insertion into said second plurality of holes in said first interposer;

a first interposer slide including a first interposer cable housing having a first plurality of through holes corresponding to said at least one central conductor and a second plurality of holes partially overlapped in a radial direction with a respective one of said conductive outer jackets;

a first retainer positioned between said first interposer cable housing and said first interposer slide for retaining said first plurality of electrically conductive spring elements and said second plurality of electrically conductive spring elements;

a second interposer cable housing having a third plurality of through holes corresponding to said at least one central conductor and a fourth plurality of holes partially

overlapped in a radial direction with a respective one of said conductive outer jackets;

a third plurality of electrically conductive elements for insertion into said third plurality of through holes in said second interposer;

a fourth plurality of electrically conductive elements for insertion into said fourth plurality of holes in said second interposer;

a second interposer slide including a third interposer cable housing having a third plurality of through holes corresponding to said at least one central conductor and a fourth plurality of holes partially overlapped in a radial direction with a respective one of said conductive outer jackets;

a second retainer positioned between said second interposer cable housing and said second interposer slide for retaining said third plurality of electrically conductive spring elements and said fourth plurality of electrically conductive spring elements.

47. (Previously Presented) The electrical interconnect of claim 46, wherein first plurality and the second plurality of conductive spring elements are fuzz buttons.

48. Cancelled.

49. (Original) A compression mount electrical connector for mounting to a printed circuit board having a guide pin, comprising:

a housing including a plurality of signal paths;

a latching mechanism including a latching device in the housing for latching onto the guide pin.

50. (Currently Amended) A twinax electrical connector including a latching device, comprising:

a twinax cable having two electrical conductors spaced from each other and having a dielectric surrounding said two electrical conductors and an electrically conductive ~~layer~~ jacket surrounding said dielectric, said two electrical conductors each having exposed opposite ends;

a first plurality of shielding members in electrical contact with one end of said electrically conductive jacket;

a second plurality of shielding members in electrical contact with an opposite end of said electrically conductive jacket;

a first set of conductive spring elements each in contact with a corresponding one exposed end of said two electrical conductors;

a second set of conductive spring elements each in contact with a corresponding second exposed end of said two electrical conductors; and

~~a latching mechanism including a latching device in the housing~~ for latching onto ~~[[the]]~~ a guide pin.

51. (Previously Presented) The twinax electrical connector of claim 50, wherein the first plurality and the second plurality of conductive spring elements are fuzz buttons.

52. (Previously Presented) An electrical connector having a plurality of twinax cables arranged in a vertical and horizontal array and having a latching mechanism, comprising:

a first set of twinax cables arranged in a vertical array and spaced from each other;

each twinax cable having a pair of conductors, a dielectric layer and an electrically conductive jacket;



a second set of twinax cables arranged in a vertical array and spaced from each other and horizontally spaced from said first set of twinax cables;

a first plurality of conductive spring elements each positioned against a corresponding conductor;

a second plurality of conductive spring elements each positioned against a corresponding conductor;

a cable housing for retaining said first set and said second set of twinax cables;

a first interposer on one side of said cable housing for receiving one end of said first set and said second set of twinax cables;

a second interposer on another side of said cable housing for receiving an opposite end of said first set and said second set of twinax cables;

a first retaining sheet for retaining signal spring contacts in contact with each pair of conductors on said one end of said first and second set of twinax cables;

a second retaining sheet for retaining signal spring contacts in contact with each pair of conductors on said opposite end of said first and second set of twinax cables;

a first interposer slide biased in a direction away from said first interposer and receiving an opposite end of said signal conductors and having a retracted position and a normal extended position;

a second interposer slide biased in a direction away from said second interposer and receiving an opposite end of said signal conductors and having a retracted position and an extended position;

wherein said conductive spring elements retained by said first retaining sheet and said second retaining sheet are protected by said first interposer slide and said second interposer slide, respectively when each is in said retracted

position and wherein said first plurality and said second plurality of conductive spring elements extend beyond said first interposer slide and said second interposer slide respectively when each is in said normal extended position;

a latching mechanism including a latching device in the housing for latching onto the guide pin.

53. (New) A twinax electrical connector, comprising:

a twinax cable having two electrical conductors spaced from each other and having a dielectric surrounding said two electrical conductors and an electrically conductive jacket surrounding said dielectric, said two electrical conductors each having exposed opposite ends;

a first plurality of shielding members in electrical contact with one end of said electrically conductive jacket;

a second plurality of shielding members in electrical contact with an opposite end of said electrically conductive jacket;

a first set of conductive spring elements each in contact with a corresponding one exposed end of said two electrical conductors;

a second set of conductive spring elements each in contact with a corresponding second exposed end of said two electrical conductors;

a first interposer housing for receiving a portion of said first plurality of shielding members;

a second interposer housing for receiving a portion of said second plurality of shielding members;

a first retaining sheet for retaining said first plurality of shielding members and said first conductive spring elements;

a second retaining sheet for retaining said second plurality of shielding members and said second conductive spring elements;

a first movable interposer slide for receiving another portion of said first plurality of shielding members; and

a second movable interposer slide for receiving another portion of said second plurality of shielding members.

54. (New) The twinax electrical connector of claim 53, wherein said twinax connector carries signals having data speeds exceeding 5 Gb/sec.

55. (New) The twinax electrical connector of claim 53, wherein the twinax cable has an elliptical cross-section.

56. (New) The twinax electrical connector of claim 53, wherein said exposed opposite ends of said twinax cable extend into said first and said second interposers, respectively.